

Biomass Systems

Small Modular Biomass Systems

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Objective: To develop small modular biopower systems

Fuel flexible:

- Efficient
- Simple to operate
- Minimum negative impacts on the environment
- Power range: 5 kW - 5 MW.

Individual Households to Institutions (hospitals, schools) Less Than 100 kW_e

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| • Sunpower | Gasification/Stirling Engine |
| • CPC | Gasification/IC Engine |
| • STM | Gasification/Stirling Engine |
| • Reflective Energies | Gasification/Gas Turbine |

Industries, Mini-Grids, and Grid Support Greater Than 500 kW_e

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| • Agri-electric | Fluid-Bed Combustor/Steam Turbine |
| • Bioten | Direct-Fired Combustor Turbine |
| • Carbona Corp | Gasification/Steam Turbine |
| • EERC | Fluid-Bed Combustor/Steam Turbine |
| • Niagara Mohawk | Gasification/IC Engine/Gas Turbine |

Multiphase Project:

- Phase 1: Feasibility Studies
- Phase 2: Prototype Development and Testing
- Phase 3: Integrated Systems Demonstration

Small Villages and Industries 100 kW_e - 300 kW_e

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|-----------------------|------------------------------|
| • Reflective Energies | Gasification/Gas Turbine |
| • Bechtel | Gasifier/Engines/Gas Turbine |



NREL's molecular beam mass spectrometer helps industry partners define process conditions in real time and minimize process emissions

China Village Power Concept

PR China Ministry of Agriculture and NREL

